A

PRACTICAL TREATISE

ON CULTIVATING

LUCERN GRASS.

Improved and Enlarged.

AND

Some Hints relative to BURNET and TIMOTHY Grasses.

Most Humbly presented to

The Honourable Society for the Encouragement of Arts, Manufactures and Commerce.

By B. ROCQUE, of WALHAM-GREEN.

LONDON:

Printed for *R. Davis*, in *Piccadilly*, and *T. Caslon*, opposite Stationers-Hall.

M DCC LXV.

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By R. ROGUE, of WALHAM-GREEN.

LONDON:

Printed for Dodsley in Pall-Mall, and T. Cadell,
opposite Somerset-House.

MDCCLV.

TO THE

HONOURABLE SOCIETY

FOR THE

Encouragement of Arts, Manufactures, and Commerce.

MY LORDS and GENTLEMEN,

INcouraged by your kind Indulgence to, and Approbation of my feeble Attempts, I have ever ſince been ſtudious, to make Experiments to the Improvement of Agriculture; but particularly attach myſelf to the Culture of Graſſes. On which, what few Improvements I have made, ſince my former Practical Treatiſe on Lucern Graſs, and Letters on Burnet Graſs; I flatter myſelf will be acceptable to your Honourable Society.---- They will conſiſt only in ſome Additions

ditions and Alterations to that Treatise, and some Hints on Burnet and Timothy Grasses.----To the Head of which, I shall take the Liberty to prefix, an Excellent Tract of an Excellent Author, communicated to me by the Reverend Mr. Lambe.

I embrace this Opportunity of returning my Humble Thanks, for your kind Gratuity: An Honour, of which I shall ever retain the most Grateful Sense. I remain, with the greatest Respect,

MY LORDS and GENTLEMEN,

Your Most Obliged, and

Most Obedient,

Humble Servant,

WALHAM GREEN,
Feb. 1. 1765.

BARTH. ROCQUE.

QUERIES ſent into FRANCE,

ABOUT THE SEED

LA LUCERNE.

WHEN one N. N. was laſt in France, being in Diſcourſe with Dr. D. about St. Foyn, he was then told by Dr. D. that, for the Improvement of barren Grounds, there was (in thoſe Parts of France about Paris) another Seed, that did far excell St. Foyn; and that the Name of that more excellent Seed was La Lucerne. I am deſired by a Friend of mine, (to whom N. N. related this Paſſage of Dr. D.) that, by your Kindneſs, he may be ſpoken to of this Lucerne: And his Directions deſired, Where the ſaid Seed is to be had? For what Price? How much is uſually ſowed upon an Engliſh Acre? What Time of Year it is ſowen? Whether it be ſowen alone, or with any other ordinary

ordinary Corn? And with what Corn? And with what Kind of Land it best agrees? And, finally, with other Particulars he can direct, more than is here set down?

Answer to the Queries from Paris.

I have been with Dr. D. about Lucerne; who tells me, that it groweth best upon wettish Grounds: That the best Time of sowing it in England will be in February, when Oats are sown; with the which also it may be sown, but best alone: That to the sowing of an Arpent, which is much the same with an English Acre, there will go 12 or 15 lb. of the Seed; the which useth to be sold here at 8 or 9 Sols the Pound.

More Queries concerning Lucerne.

I desire further to know, What Kind of wet Grounds are best for it? whether Moorish or Clay? whether poor or rich? Whether it must be sown yearly, or whether it will continue over a Year in the Ground? and if more than a Year, then How many Years it will continue without being new sown? Whether

ther it be only good for Meadows, or for Pasture? and, if for Pasture, then whether the Sheep or Cattle be suffered to go upon it; or whether it be carried off green, as the Clover Grass is in Flanders? Lastly, for what Cattle it is most proper?

Another Answer from Paris.

I thought to have sent you 9 lb. of the Seed of Lucerne, for sowing of three Acres; Dr. D. having told me, as heretofore I told you, that three Pound will sow an Acre, or Arpent: But, as I was going about it, I met a Gentleman, an Acquaintance of mine, who some Years since, (but unknown to me hitherto) hath had some Acres of Meadow of Lucerne upon his Ground; to whom having casually spoke of my Business, and told him all that Dr. D. had told me about the Lucerne; he answered me, that Dr. D. was most grosly mistaken in the Quantity of Seed required for the sowing of an Acre; and that it would not take up 3 lb. but two whole Sacks, each Sack containing the full Load of a strong Porter. At which Rate the Quantity of Seed required for the sowing of three Acres, will fill a great Dry-fat: the sending whereof by Land, would come to excessive great Charges; and therefore necessarily to

be ſent by ſea, in my Opinion. —You will be pleaſed to impart theſe things to your Friend and to let me know his final Reſolution upon them; the which ſhall be faithfully accompliſhed by me: And, in the mean while, I will get him a full and perfect Anſwer upon all his Queries; not from Dr. D. whom I dare truſt no more in this Buſineſs, having found him guilty of ſuch groſs Miſtakes about it; but from that other Gentleman, who told me he could reſolve moſt of thoſe Queſtions, but that, to be ſurer, he thought it beſt to confer firſt with his Farmer about it. You make Apologies for putting me upon theſe Inquiries: But I pray you to believe, I ſhall at any Time moſt readily and chearfully ſerve you to the beſt of my Power, for you or any of your Friends.

The laſt Anſwer concerning Lucerne.

The Information I have got from my Friend about the Lucerne, being a very particular one, and containing a very full Anſwer to all the Queſtions propounded by your Friend, is as followeth:—It requireth a rich Ground, but ſomewhat looſe and light; ſo as a tough Clay, and ſuch other ſtiff Grounds, are not fit for it. The Ground muſt not be over dry, nor over moiſt, but in a mean, yet

yet ſomewhat more inclining to Moiſture than to the contrary. ——— It muſt be ploughed 3 Times; the firſt Time in October, and the ſecond and third toward the Spring. Naturally it doth not love Dung, and cometh much better in a Ground that is ſufficiently rich of itſelf, than that which hath been enriched by dunging; and where Dung is made uſe of, it muſt be very ſtale and rotten, and long before the ſowing Time. It cannot endure the cold; and therefore muſt not be ſowed till the cold Weather and all the Danger of it be paſt, viz. about the Beginning, or Middle of April. The Quantity of the Seed is the ſixth Part of Corn that the ſame Ground would require; ſo as only one Buſhel of Lucerne is to be ſown on that Space of Ground that would require ſix Buſhels of Corn. It muſt be carefully weeded, eſpecially in the Beginning; and, to the End that it may take the more firm Root, ſome Oats muſt be mixed with it, but in a very ſmall Proportion. It is to be cut as ſoon as it beginneth to flower: Which (in the hot Countries, Provence, Languedoc and Spain) it doth five or ſix Times, and ſome Years ſeven or eight Times in a Summer; but in this Climate, it uſeth to be cut twice a Year, about the End of June, and about the End of September. Being cut, it muſt be turned very oft, that it may dry the ſooner, and be carried off the Ground as ſoon as may be; and

ried

it muſt be kept in cloſe Barns, being too tender to be kept in Ricks open to the Air, as other Hay. It is good for all Kinds of Cattle, Kine, Sheep and Goats; and as well for the young ones (Calves, Lambs, Kids) as for the others; but above all, it agreeth beſt with Horſes. It is much more feeding than any other Hay, inaſmuch as any lean Beaſts will ſoon grow fat with it; and to Milch Beaſts it procureth Abundance of Milk; but it muſt never be given alone, eſpecially to Beaſts that have not been long uſed to it: But muſt ever be mixed with Straw, or with ſome other Hay; for otherwiſe it over-heateth them, and filleth them too much with blood, and that ſo ſuddenly, as it greatly endangereth their Health and their Life too; which it doth principally to Kine, to whom it is more dangerous, if too plentifully given, than to any other Cattle. After your laſt cutting, you may let your Cattle graze on your Lucerne Fields; and that all Winter long, until the Beginning or Middle of March. Of once ſowing you will have your Meadow continue good for ten or twelve Years, and until fifteen, and after too it will ſtill continue to bear, but the Herb will then notably decay in Goodneſs. Kine muſt never eat of this Herb green, but only dried, and that moderately too, as hath been ſaid: But Horſes eating green of it in the Spring, are purged thereby, and grow fat by it in eight or ten

Days

Days Time. If one desire to have of the Grain, one may let such a Proportion of the Meadow as one will grow up to Seed, after the second cutting, any Year except the first only; and when the Seed is ripe, the Tops of the Herb, with the Pods wherein the Seed is inclosed, must be cut in a dewy Morning, and put into Sheets, for fear of losing the Seed; which must be beat out with Flails upon the same, when well dried: and afterwards the remaining Part of the Herb must be mowed close to the Ground; after which it continueth to sprout out again, after the usual Manner. The Hay of it will keep good two or three Years; and one Acre is sufficient to keep three Horses all the Year long.

Postscript to the last Answer concerning Lucerne.

SIR,

The Gentleman who had given me the Note about the Lucerne, hath told me since two Particulars more, which he had forgot to put into it. The one, that not only to other Cattle, but even to Horses, (with whom that Hay agreeth best of all other Beasts) it is not to be given but in Winter; because that, in the Summer, it would too much heat their Blood: And the other, that this Hay must

be

be perfectly well dried, before it be carried off the Ground, and to that End turned very often; because that being put up with the least Moisture, it will quite spoil, much more than any other Hay.——Now these, and all the other Particulars which I have had from that Gentleman, have been confirmed to me by many others: And yet within these two or three Days, I met with a Physician of Rochelle; who, assuring me that Lucerne was very common in his Country, made me a Relation of it, agreeing with the former only in these three Points, viz. That of once sowing it will continue 10 or 12 Years; that it is cut twice a Year, serving for Pasture afterwards all the Winter; and that it wonderfully fatneth all Kind of Cattle: But very much different from it in all the others, and in some of them point-blank contrary to it; for he saith, that it is to be sown in the Beginning of March; that it desireth a temperate Ground, rather dry than wet, and noways fat nor clayish, but stony and gravelly; that it need not be mixed with any other Hay, but may be given alone, and all the Year long, in Summer as well as Winter, not only to Horses, but to Cows and other Cattle. He addeth, that the Proportion of Seed is the Charge of a Porter for four Arpents or French Acres.——Which Particulars I thought good to write unto you, that your

your Friend, comparing them with the others, might make his best Profit of them: And this Rocheller, who hath lived three or four Years in England, thinks that the Lucerne will come admirably well in that Country.

NOTE.

The Meaning of these Words, (p. 11. l. 14.) "The Quantity of the Seed is the sixth Part of "the Corn the same Ground would require," is this; that whatever Quantity of Wheat or Barley an Acre of Ground would require; you must take but the sixth Part of that Quantity of the Seed of Lucerne: So as that Ground, which for its sowing requires six Bushels of Corn, doth require but one Bushel of Lucerne Seed.

An Arpent de Terre (which how much it is in English Measure, Cotgrave's Dictionary will perfectly tell you) requireth 10 lb. of that Seed, as several Grain-sellers, of whom I went to enquire for it, have unanimously told me: the Seed being exceeding small, and to be sown wonderfully thinly. As for St. Foyn or Holy Hay, I have seen it grow here about Paris, in several Places, in rich fat Grounds, and those both high and dry, and others low and marshy. It is cut but once a Year, much about the same Time as other Hay; and a great Deal of the Seed is required for sowing the Ground with: Being once sown, it lasteth

lasteth ten or twelve Years, as well as Medica or Lucerne; wherewith also it correspondeth altogether in its Virtues and Uses.

Hartlib's Last Legacy to his Countrymen, London, 1651.

I have no more Room left, than to tell you, that I shall be always glad of any Opportunity of shewing how ready I shall be of obliging Mr. Rocque, I am,

Your's Most Sincerely,

D. LAMBE.

A PRAC-

A

PRACTICAL TREATISE

ON

Cultivating LUCERN GRASS, &c.

Most humbly presented to

The Society for the Encouragement of Arts, Manufactures, and Commerce.

LUCERN Grass will grow on any Sort of Land, if Water does not stand on it in Winter to rot the roots.

The strongest Land is to be preferred; and the deeper it is for the roots to run down in, the better will be your Crop.

Your Land muſt be ploughed well, and harrowed, and cleaned from all Sorts of Weeds, as you do for Barley; and, the ſtronger the Land is, the more Ploughings and Harrowings it will require to mellow and ſweeten it.

When you have got your Land clear of Weeds, and thoroughly mellowed and ſweetened, by often ploughing and harrowing; you muſt, in fine Weather, ſow your Lucern Seed, broad caſt, (not in Drills) about fourteen Pounds to an Acre.

It is likewiſe neceſſary to manure your Land before the laſt ploughing; not with old rotten Stuff, as is uſual, but with freſh Stable Dung that has been thrown up in a Hill three or four Weeks to ferment; and when it is in full Fermentation, you are to lay it on your Land, and plough it in as ſoon as poſſible, that the Salts of the Dung may not have time to evaporate: Then harrow your Land, and ſow your Seed, and harrow it again with a light Harrow, or a Buſh Harrow; and, laſtly, run a Roll all over it, to ſettle the Ground and break the Clods.

You muſt not ſow Lucern, without Corn; unleſs, your Spot of Land is too ſmall to uſe a har-

a harrow in: In that Caſe, you muſt ſow it in Drills, and keep it very clean hoed. — The Drills for ſuch ſmall Spots are to be ten Inches diſtant; if wider, it lodges in the drills. The Reaſon I recommend ſowing Corn with it, is, to prevent the Weeds choaking it; but, you muſt ſow only for half a Crop; otherwiſe your Corn will be apt to deſtroy your Lucern; eſpecially if it proves a wet ſeaſon, and your Corn is ſtrong. If there is no corn ſown amongſt it, you muſt be obliged to mow the Weeds, and run a Chance of cutting the Lucern with them: And, being very ſappy, you cannot imagine how detrimental it is to bleed it, when young; but, when the Corn will be fit to mow, the Lucern alſo may ſafely be cut.

As to the Duration: It will laſt as long as the Ground is kept clean. I ſaw ſome, at Mr. Middlemar's at Grantham, in his Garden, that was forty Years old; and it was very fine. To keep it thorough clean, you muſt harrow it every time it is mowed; and, if requiſite, at Michaelmas, and in February and March: If you once leave it foul, it will be very expenſive to clean. You muſt make uſe of the Drill Plough; but let the Harrow be ever ſo ſtrong, you need not fear its hurting it.

From

From the Beginning of March to the End of May, you may ſow Lucern; but April, in dry Weather, is the beſt Time.

If much Rain falls on the new-ſown Lucern, it will be apt to ſwell too faſt, and burſt: But, if it holds fine three or four Days, it will be in no Danger.

I do not approve of drilling the Lucern, becauſe the Roots are too much confined in the Drills: They ſay it is to clean the Lucern between the Rows that they drill it; but it is for want of knowing the Nature of Lucern, and which diſcourages People from ſowing it, drilling and hoeing being very expenſive Ways; the quickeſt and cheapeſt Way being to ſow it broad caſt, as you do Clover, and by much the beſt, as the Roots will ſtand nearly at equal Diſtances one from another every Way.

To ſow it later than May is dangerous, in caſe of a dry Seaſon, or its being eat up by the Flies.

Lucern will not grow on freſh broke up Land; it muſt be tilled a Year or two.—Peaſe and Beans for one Year will prepare the Ground; but above all Potatoes excel for

ſweetening

ſweetening and mellowing of Land: the next Seaſon a Fallow for Turnips; and when the Turnips are fed off with Sheep, it will greatly enrich your Land: Then prepare for your Lucern.

You are to conſider the Nature of your Soil, in regard to the Tillage, and Time of ſowing your Lucern Seed. Heavy, ſtrong Land will require more ploughings and harrowings, and to be later ſown: Light Land will need fewer harrowings and ploughings, and to be ſown earlier, that the young Plants may have Strength to ſend their Roots deep into the Ground, before the hot dry Weather approaches to hurt them: and if you can give your Ground, for the Firſt Time a French Ploughing, it would be of great Advantage. In caſe you are not well acquainted with the State of your Ground, you muſt French-plough it twice; according to the Directions for ploughing, which are in my Hints upon Burnet; whereby the Roots will run down the ſooner out of the Reach of dry Weather: And if the Soil, that is turned up, be ever ſo ſour; future ploughings, harrowings, and manurings, will ſweeten it ſufficiently for the Reception of the Seed.

Lucern will grow very well in Clay Land, with Proviſo the Ground works well. The Diffi-

Difficulty in these Lands lies in the harrowing; in dry Weather the Ground being so very hard, the Harrow can do but little Good unless you take the Season between wet and dry to harrow it, which you certainly must.

In Languedoc they sow no Corn with it: And, when the Lucern is six or seven Inches high, they mow it; by which all the Seeds of annual Weeds are cut off and killed. By my own Experience, I find they are in the wrong; for it bleeds it, so that the Plants make but little Progress when cut so young, and are a long Time in recovering it. It ought never to be cut but when in Bloom.

In Normandy, the Climate being much the same as in England, they sow Corn with it.

In Picardy, aud about Paris, they sow it, some with, others without Corn.

At Avignon, when their Lucern begins to decline, they manure their Ground, and plough afresh, and sow it with Corn and Lucern; and the old Roots growing again with the Seed, make another fine Crop. The ploughing will not hurt the old Roots.

If you sow a full Crop of Barley with your Lucern, and your Barley grows very strong; your

your beſt Way is, to mow down your Barley when it is in the Ear.

If you ſow forward Peas on your new broke up Land, to prepare it for Lucern, you may in one Year perform it, and ſow Turnips on it as ſoon as the Peas are off, and the Turnips may be fit to feed off by Chriſtmas: And as ſoon as the Turnips are off, you are to plough the Ground, and let it lie fallow till a proper Time to ſtir it again, or give it a Trench ploughing, as before directed.

In hot Summers the Seed may be ſaved in England; but not from the firſt Growth, that being generally too rank, and ſubject to rot at Bottom: Tho' I think it is needleſs attempting to ſave any of the Seed in England; for, in the Year 1761, which was a very fine Summer, I tryed to ſave the Seed of the ſecond Growth, on light Land, but made nothing of it; not ſaving above thirty Pound of Seed, upon four Acres and a Half. I alſo tried, that ſame Summer, to ſave ſome off ſtiff Land; but that proved ſtill worſe.

In Languedoc, they ſave it from the third Growth; but, as this Climate is colder, it will not ripen, if you do not ſave it from the ſecond Growth.

If

If any are bent upon ſaving of the Seed, a dry Soil is beſt to ſave it upon, as it is not ſo apt to grow rank; and then it may poſſibly do from the firſt Growth.

Lucern, if the Land be good whereon it is ſown, will bear ſeveral Crops in one Year. What I mean by the firſt, ſecond and third Growths, is, the different Crops it produces in one Summer; which is three, four, and ſometimes five Mowings, in caſe you ſave no Seed from it; which if you do, you muſt, as I ſaid before, ſave it from the ſecond Growth: The Seed will be ripe in September, and muſt be gathered by Hand. I have already obſerved, it ought not to be cut but when it is in Bloſſom; and that is but three Times a Year: But, after mowing the third Crop, you may, inſtead of mowing the fourth, ſeed it. But when Froſts come, you muſt take your Cattle off; becauſe there are always young Shoots, which would be bruiſed, if the Cattle were not taken off. If it is rank in September, it is dangerous for Cows, being too feeding; but turn Horſes and Sheep upon it: As there is no Graſs, as has yet come to our Knowledge, which gives the Cows ſo much Milk; you may let them graze about an Hour, at moſt, in the Afternoon,

noon, when the Dew is off. When made Hay, it is likewise the best for Milk: Wherever it is much cultivated, they prefer it to all other Kind of Hay. When I was at Monosque, a City in Provence, which was about twenty seven Years ago, the Carriers fed their Horses upon it, preferably to any other, without Corn; and the Mules looked fat and in fine Order. Six Mules which I hired there, to carry my Seeds at Nimes, fed on nothing else; and yet carried their Load all Day long, without unloading: They have the Custom of hanging little Bags to their Horses or Mules Heads, wherein they put Lucern, on which they feed as they go.

It is acknowledged by all Connoisseurs to be the most feeding of all Pasture, either green or in Hay. I trust not barely to Report, but have experienced it to be so myself: I had Colonel Vernon's Horse sent to me from the Country, in a very poor Condition; and, in fourteen Days, he was in very good Order: The Colonel was surprized to see how he had throve in that short Space of Time. Many are apt to condemn it, but it is for want of knowing its good Qualities. It has been introduced, it is manifest, for a long Series of Years; as appears by that excellent Tract at the Head of this, which is punctu-

 ally

ally drawn from the Original: To which had due Attention been paid, our modern Writers would not have drawn the Public into ſo many Errors. It had been ſo little noticed, that one and twenty Years ago, there was not two hundred Wt. of Lucern Graſs Seeds to be ſold amongſt all the Seedſmen here in London: And I had much ado to re-introduce it; but now, within theſe three or four Years, there is a prodigious Conſumption of it.

One Mr. Beadle, a Farmer in Kent, has fourteen Acres of it, for which he had a Premium. When I called upon him, which was in the Beginning of May laſt, he had mowed his Lucern, and ſold it upon the Spot, for three Pounds or three Guineas a Load. I blamed him for cutting it ſo young; but he told me he was compelled to it, to get Fodder for eight hundred Head of Sheep that he had: But that, a little while after, it grew ſo faſt, that he could turn his Sheep upon it. Thoſe that bought his Hay, muſt needs be well acquainted with the Goodneſs of it; to fetch it on the Spot, though they were ten or twelve Miles diſtant. It is not foggy, like Clover or Tares. Horſes will work with it green, as well as with Hay or Corn: They do not ſweat with it, as they do with other

green

green Fodder. I have been told, one of our Poſt-Maſters kept his Horſes both Winter and Summer with it; and that his Horſes were the beſt on the Road. They object the Hay of it is difficult to make: It is no more difficult than Clover. All Hay is difficult to make in wet Weather: But when it is a bad Seaſon to make Hay, do as Mr. Allen does: put it up in Ricks when dry, and between every Bed of Hay, of any Kind, put a Layer of Salt; and that will recover all the Damage the Rain can have done.———I have done it myſelf, this very laſt Year, with a Rick of Burnet: To about twelve Loads I have put a Sack of Salt amongſt it; and every Time my Horſe comes near it, he eats it very eagerly, though he can get but at the Outſide of it: It will keep in Ricks as long as any Hay. Multitudes at preſent are pretty well acquainted with the Excellence of both theſe Graſſes: But if any doubt the Truth of what I aſſert, let them take the Trouble to inquire into it, of Mr. Shennelly, the Tobacconiſt at Houndſditch; to whom I have ſent a Load of Lucern, and am to ſend another Load of the ſame, and half a Load of Burnet Hay.

Thoſe who are not ſatisfied with the Theory, may be convinced of the Practical Part, by

by ſeeing a Field of mine of Lucern, of four Acres and a Half, at Batterſea, and the Manner of working the Harrow.

When your Plants are one Year old, you muſt, with a large Harrow, go over your Land as often as is ſufficient to root up annual Weeds and Graſs.

The Harrow will not hurt the Lucern, the Roots of it being very tough: This muſt be done in dry Weather, before it begins to ſprout, which is very early in the Spring, that the Weeds and Graſs may die; and if you ſee any Patches of your Ground, where the Seed miſcarried, you may ſow a little Seed and harrow it: If you give it a Dreſſing of rotten Dung at the ſame Time, it will repay your Expences with a larger Crop. If the Harrow ſhould cut or wound any of the Roots, they will ſprout and grow notwithſtanding.

The ſecond Spring after ſowing, it will be proper to plough the Ground where your Lucern grows, only in caſe it be very foul; the Harrow being ſufficient. But if it be very foul, it muſt be ploughed with a Drill-plough, with a round Share, without a Fin or Feather; and without a Coulter, to prevent the

Roots

Roots being too much hurt: Let it lie rough a few Days to dry and mellow; then, in fine Weather, harrow it down fine, that you may mow it the closer.

One not used to the Culture of Lucern, will be ready to think, that the ploughing amongst the Lucern will destroy it; But I can shew any Gentleman that will take the Trouble to call at my House, that Experience teaches the contrary.

To make Hay of Lucern, you must, as has before been said, mow it, but in full Bloom: You must not spread it, as you do common Grass; but let it lie in the Swath as you do Clover, and turn it in the same Manner, otherwise the Leaves will drop off.

If you let it stand too long before you mow it, the Stalks will be too hard for Cattle to eat it, and it loses much of its Goodness.

The Hay is good for all Sorts of Cattle: And when you feed Horses with it, you must not give them their full Allowance of Corn; the Lucern answering, in a great Measure, the Purpose of both Corn and Hay.

It

It is alſo the moſt profitable of any Sort of Fodder, to feed Horſes with in the Summer, by mowing, and giving it to them green.

If the Land be good, the Produce is incredible; and according to the Goodneſs and Depth of your Soil, ſo will your Crop be.

I have ſeen Lucern mowed five Times in a Seaſon; yielding, at the five mowings, nearly eight Loads of Hay per Acre: But, as aforeſaid, I do not approve of mowing it above three Times.

The Spring Ploughing amongſt your Lucern muſt be annually repeated; it kills the Graſs and Weeds, and makes the Ground ferment, which promotes Vegetation: And the oftener you refreſh it with a little Dung on the Surface, the better it will pay for your Trouble.

The large Harrow will have the ſame Effect as ploughing. If the Dung be laid on before the Winter, that the Salts may be waſhed in by the Rain and Snow, and harrowed in, in the Spring, it will greatly add to your Profit.

As

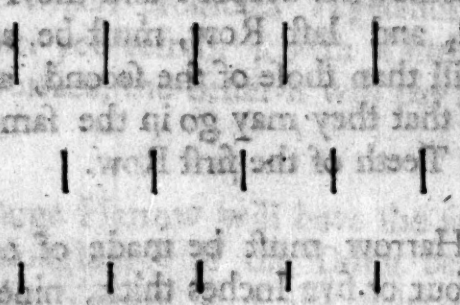
As the different Sorts of Soil may require different Methods of Tillage; I have ſubjoined the Deſign of a Harrow, with two Handles, like a Plough; which may ſerve in light Land inſtead of the Plough; aud will ſave ſome Labour.

The Teeth muſt be ſet at ſeven or eight Inches apart in the firſt Row, and about thirteen Inches long, without the Wood; inſtead of only five Inches, as had been ſaid. The ſecond Row muſt be placed nine or ten Inches behind the firſt Row; and ſo that the Teeth of the ſecond Row may be againſt the Spaces of the firſt Row; and they muſt be an Inch longer than thoſe in the firſt Row; ſo that the Ground, being looſened a little by the firſt Row, the Teeth of the ſecond Row may go ſomewhat deeper: and the Teeth of the third, and laſt Row, muſt be an Inch longer ſtill than thoſe of the ſecond, and placed ſo as that they may go in the ſame Tract with the Teeth of the firſt Row.

The Harrow muſt be made of one ſolid Piece; four or five Inches thick, nine Inches wide; and add one Tooth more to each Row, which will diſpatch more Work. My Reaſon for having the Teeth longer, is, that when the

the Ground is very foul, it choaks the Harrow, when the Teeth are not long enough; The lower Side must be rounded off, towards the hinder Part, where the Teeth are longest; whereby the Person that holds it by the Handles, pressing down a little, may force the second and third Rows of the Teeth deeper than the first; and, by bearing up a little, he may prevent any but the first Row from working. Very little Practice will be sufficient to make any one use it, as Occasion requires: And it will be so steady that no Unevenness of the Ground will be able to throw it out of its Work; as a Clod, or a Stone, will a common Harrow.

The Manner the Teeth are to be placed.



N. B. The foremost Row of Teeth, are placed, in a Line a-cross, near the Middle of the

the Block or Plank; the other two Rows behind that: And the Fore Part of the Harrow ſhould be heavier than the Hind Part; when the Weight of the Harrow is ſuſpended on the firſt Row of Teeth. The Teeth ſhould be pretty ſtrong and round; their being ſquare as uſual, may hurt the Roots a little; which is to be avoided as much as poſſible, though it be of very little Conſequence.

*** The Model of the Harrow is to be ſeen at the Author's; and at John Rocque's Widow's, in the Strand.

SOME HINTS RELATIVE TO BURNET GRASS.

AS ſeveral Ancient and Modern Authors have treated of Burnet, I ſhall not undertake deſcribing it here; but ingenuouſly own, I know it only under the Denominations of Pimpernelle in French, and Burnet in Engliſh: And I ſhall content myſelf with putting you in the right Method, according to the Experience I have made, of the moſt advantageous Manner of cultivating it.

The

The Lands which ſuit it beſt, are dry. ——It grows in ſtony and gravelly Lands; and grows well in ſtrong Lands, with Proviſo the Water does not ſettle upon it; for if it does, it will ſpoil the Points of the Roots.

Burnet will not do in new broke up Land: The Land muſt have been broke up a Year at leaſt, before you begin to ſow Burnet in it. During that Year, one may ſow either Oats, Corn, Peas or Beans, or any Sweetener; but thoſe I have juſt mentioned, and Potatoes eſpecially, are the propereſt to ſeaſon new broke up Lands: For when new broke up, there is a certain Bitterneſs, that does not much ſuit any Thing, unleſs it is Peaſe or Oats. It is not to be ſaid, that no new broke up Lands will do for Burnet: For there are ſome will; with Proviſo you give them three or four good Ploughings. The Tiller muſt be experienced; to be able to judge of the Nature of the Ground, whether it be ſweet or bitter, either by handling, or ſmelling of it.

Thoſe Lands which have that Bitterneſs, are ſeveral Years a ſweetening. There are ſome Lands one cannot dig deep in, without bringing up dead Earth: Where that dead

Earth

Earth is to be found, within ſeven or eight Inches of the Surface; it would be proper to plough that Ground twice over in the ſame Place; that is, to have two Ploughs to follow one another in the ſame Track: After having thus ploughed it, when it is ſettled, it ſhould be ploughed over again, in the ſame Manner; that the Earth that was underneath, before the firſt Ploughing, may return to its Center. I have dwelt upon this Article, becauſe I have experienced the Neceſſity of following theſe Rules.

I pulled up a Root of St. Foin, that was nine Feet ten Inches long. I dug in a Piece of ſtrong Land firſt, one Foot deep, which proved very good: The Earth of the ſecond Foot was partly the ſame as that of the firſt, but mixed with Chalk, and ſtinking: That of the third, was a blue Clay, very ſtrong, and very ſtinking: That of the fourth and fifrh, continued of that bluiſh Earth; and that of the ſixth, of a white Sand: That of the ſeventh, eighth and ninth, mixed of Sand, and ſome blackiſh Veins of Earth: But, the whole very bad, except the firſt Foot.

I am convinced, that had one taken an hundred Weight of that ſtinking Earth, and ſpread or ſtrowed it upon ſix Foot ſquare of

good

good Ground; that nothing would have grown upon it, except Oats. You will ask me, How that Root could grow so much in such bad Land? I must tell you that it is not the Root works of itself, but the Motion of the Plant that forces it to seek its Nurture, where it can find it.——I am persuaded that the Distemper amongst the Cattle proceeds from nothing else but the Infection of the Earth. The great Frosts having opened the Pores, and penetrated unto that corrupted Part of it; the Vapours that proceeded from the said corrupted Part, infected the Pasture.

I have strayed from my Subject: But, to return:

Before you sow your Burnet, you must, if the Land be poor, manure it well, with any Manure whatsoever. One may sow it in April, May, June, July, or August. It bears Seed twice a Year. Work your Ground very fine with the Harrow, and roll it.—When harrowed and rolled, sow Twelve Pounds of Seed to an Acre; when sown, harrow it with a light Harrow; then roll it again. In about eight or nine Days it will come out of the Ground. It must be kept very clean the first Year, of all things; either by Hand or Hoeing: After the first Year

Year, it grows ſo ſtrong, that it choaks all other Graſſes. There is no Drought can ſtop its Growth, nor Froſts can kill it; becauſe it is always in Sap.

When the Seed is ripe, it ſheds of itſelf; One muſt cut it in the Cool of the Morning, while the Dew is upon it, if one wants to ſave the Seed. Thraſh it the ſame or the next Day: When thraſhed, it makes an excellent Fodder. And if you leave Part of the Seed with it, and dry it well; you'll find it will anſwer the ſame Purpoſe when you give it your Horſes, as if you gave them Oats with Hay.

I know no Graſs ſo ſolid: And it is to its Solidity I attribute its being ſo nouriſhing.— We have weighed it green, that is, juſt after mowing, againſt all the other Paſture Graſſes, and it out-weighs them all, without any Exception.

I ſow it like Lucern, or Corn: Some approve ſowing it in Drills, I have ſowed ſome ſo myſelf: Both Ways are equally good. As one cleans it but the firſt Year, the Difference is not much.

I have obſerved, it bears Seed twice a Year. It is to be cut but once the firſt Year. The

proper

proper Time for cutting the ſecond Crop, is about the Middle of September: A proper Seaſon for having a good Crop in Spring.

For Ground that has been in Tillage ſome Years; there is nothing to be obſerved before ſowing, but to get it thoroughly clean.

The Seed ſown in April, may be mowed at the latter End of June, or the Beginning of July: and either given green to the Horſes, or made Hay of.

That ſown in June, will produce a pretty good Crop: But you muſt likewiſe cut it but once: Which muſt alſo be in the Middle of September; being a proper Seaſon to cut it, to have a good Crop in Spring, as aforeſaid.

That ſown in July, is not to be cut.

I have ſaid, it is to be cut but once, the firſt Year: But have not mentioned, that you muſt leave your Graſs to be rank the Winter, in order to turn your Cattle in, in February, or March: And feed it till May. When you want to ſave the Seed, you muſt feed it till May: For, if you do not feed it till then, it will be too rank, and will lodge.

An

An Acre will produce upwards of three Loads of Hay, and above forty Bushels of Seed. I have cut six Roods, and weighed it, Seed and all: It weighed eleven hundred and fifty Pounds.

The Horses are fonder of that Seed than they are of Oats: And I think it much more proper Food, for those that do not work hard, than the Oats; as it is not of so hot a Nature.

The first Crop of the Burnet purges Horses, as well as the strongest Physick, for three Days successively; then it stops: This I can ascertain. Last August, being at Lord Uxbridge's, I saw six Horses, that were feeding upon three Acres of Burnet: His Lordship's Man told me, they had been turned upon it three Weeks and four Days; that they had purged the three first Days so excessively, that he thought they would scour to Death; but the purging stopped the fourth Day, and they throve amazingly: When his Lordship ordered the Horses to be turned upon it, the Bailiff told his Lordship, they would eat it in three or four Days Time: When we came to examine the Pasture, we found, the Burnet grew faster than the Horses could eat it; tho'

the Land is but very indifferent, gravelly, and full of large Stones. His Lordſhip has ſown twenty Acres; and there is no Doubt but it will turn greatly to his Profit.

The Reverend Dr. Lambe, of Ridley, near Dartford in Kent, has ſown ſeven Acres; and has told me, he would not take fifty Pounds a Year, fourteen Years together, for the ſaid ſeven Acres. He propoſes to write a Relation of it, and to preſent it to the Society for the Encouragement of Arts, Manufactures, and Commerce.

John Lewis, Eſq; of Tracey, near Honiton in Devon, has ſown ſix Acres, and repents he did not ſow twenty: But he has left Numbers of Acres fallow, to ſow ſome in next Year.

I could produce many more Inſtances of the Approbation of Burnet; but think the above ſufficient.

SOME

SOME HINTS

ON

TIMOTHY GRASS.

TIMOTHY Grass requires strong Land; and does amazingly well in Marshy Ground: As to the last, one can work that only in dry Weather; and as there are some Marshes in which Cattle sink; in the greatest Droughts, one must work them with a Spade: And, for Fear of bad Weather, sow the Seed at

at the ſame Time you work the Ground. It muſt not be ſowed very deep: When ſowed, run a light Harrow over it. In Marſhy Ground one muſt ſeize every Opportunity of ſowing it; without ſubjecting one's ſelf to Seaſons. You muſt ſow four Pounds to an Acre, both in marſhy, and ſtrong dry Land; one may ſow it, in the laſt, from February till September or October. It is not neceſſary to ſow Wheat amongſt it, as one does amongſt other Paſture; becauſe it grows, the firſt Year, like a Corn Field. Horſes and Cows prefer it to all other Paſture. In America, thoſe that put their Horſes to Graſs, make their Bargain with the Farmers, that they ſhall be fed with nothing elſe but Timothy. It grows alſo in Ruſſia: General Keith told one of our Grandees; that, commanding the Troops in Ruſſia, he had been obliged to ſend the Cavalry before the Infantry, to beat it down, otherwiſe the Infantry could never have got through it.

To make Hay of it.—It muſt be cut, as ſoon as it is in Ears; becauſe it is a ſtrong Graſs, and ſomewhat difficult to make Hay of, in bad Weather. If you have bad Weather, making the Hay, and that it is waſhed with the Rain, you muſt ſtay till it is dry Weather; then dry it well, and put in Ricks:

And,

And, when very dry, put a Layer of Salt between each Bed of Hay, as before directed.

When to ſave Seed.—One ought not to cut it but when the Seed is ripe; which is partly the ſame Time as Corn is. One may cut it in May, while it is young; but, if one does cut it then, the Crop of Seed will not be ſo large: And moreover, the Seed will ripen later; then, wet rainy Weather coming on it, when it ripens ſo late, it will not do ſo well. Timothy produces a very great Crop; and is one of the moſt excellent Graſſes: For, in Marſhes, where Horſes can ſcarcely paſs, it grows ſo ſtrong, that it can bear a Cart or Waggon. I have ſowed ſome in my Ground, in September, October, and November: And, as ſoon as it was out of the Ground, it lay under Water, and remained ſo for four Months and a Half; yet ſtill retained its Verdure, even under Water: But that I had ſowed in September and October, throve better than that ſowed in November.

F I N I S.

A

NEW METHOD

OF

Improving Land.

A

NEW METHOD

OF

Improving Land.

A NEW METHOD OF Improving Land.

SOW no Corn, without a Crop of Grafs Seed: Amongft your Wheat, you are only to fow Rye Grafs; Unlefs you can meet with fome good Hay Seed, which will anfwer the Purpofe much better. If your Grafs Seed fhould not come up fo well as you could wifh it, you will fow in the Month of March, and in dry Weather, if poffible, fix Pounds of Clover feed per Acre: Be not afraid to harrow and roll it well; which will not be in the leaft hurtful to your Wheat. This Crop

of Grafs will always keep your Land clean, and produce good Food for your Sheep: Your Corn being cut down, let the Grafs take head for about the Space of a Fortnight or three Weeks, before you turn your Sheep upon it; then continue feeding upon this Ground till the Seafon for fowing your Spring Corn; which you are to fow in the fame Manner as the former, that your Land may be always covered with good Grafs, inftead of Weeds. I recommend the Rye Grafs, as being forward; nevertheleſs I am not a Friend to it, on account of its being a coarfe Grafs; I am afraid it will draw the Land too much. We have a far better Grafs, under the Name of Po-Grafs, which is alfo very forward; but you are to make ufe of the Rye-Grafs, till fuch Time as you have a fufficient Quantity of this Po-Grafs. Amongft your Spring Corn you may have a Mixture of all Kinds of Grafs: viz. Purple and White Clover, Perennial Clover, Trefoil, &c. when, as foon as your Corn is down, a fine Turf prefents itfelf to your View. But as this Method will confume a large Quantity of Grafs Seeds, you may fow fome of your Fields with feparate Grafs, in order to keep your Seeds clean; and by this Means you will be able to judge, which Grafs is moft fuitable to your Land. When you are about to fow your Spring-

Corn,

Corn, give that Field which was Wheat the precedent Year, but one Ploughing, if light Land; but if ſtrong Land, you are to plough it two or three Times, according as your own Judgment guides you. Your Land being in order to receive your Seed, if you ſow forward, let a Buſhel and a Half of Barley ſuffice for an Acre, upon Condition that your Land is pretty good, otherwiſe two Buſhels. Alſo, if you ſow late, make uſe of two Buſhels upon an Acre; for this Reaſon, That the Corn will not branch, nor yield ſo well, as if ſown forward. As my Aim is to preſerve your Land from Filth, as well as to keep it continually cropped, when you ſave your Purple Clover Seed, you are to ſave it from the ſecond Cut; after which put the Plough to work, and get your Land in Order for what you think proper: Whereas, if you leave it for the ſecond Year your Land will get foul. What has thus far been ſaid, is chiefly in regard to your feeding of Sheep. For all other Cattle, as Bullocks, Horſes and Cows, I recommend the Lucern, to be ſown in all your deep Lands. One Acre of Lucern, will produce more Fodder, than three Acres of any other Graſs; and is the richeſt of all that have reached our Knowledge. It will fatten a Bullock better in five Weeks, than the beſt Fodder you can have of any

other

other Kind will, in two Months: A Cow will yield near a double Quantity of Milk: A Horſe will get fat, in his Work, with half the uſual Allowance of Corn. Again, this Fodder is ſo rich, that the Horſes do not eat near the Quantity of it, as they do of common Hay. It will be proper to mow your Lucern, the Day before you give it to your Cattle. It has been reported by ſome, that the Lucern will not make good Hay, but that I impute to their want of Experience. I make Hay of it every Year, and look upon it as the beſt of all Hay, for feeding of all Kinds of Cattle. Doubtleſs, if the Weather prove bad, all Hay will receive Damage, little or much: But I do not perceive but that the Lucern will preſerve itſelf as well as any other Hay. As this Lucern produces ſo great a Quantity of Fodder, it conſequently will produce as great a Quantity of Manure. The Place where you intend to fodder your Cattle, muſt be made upon a Deſcent of a conſiderable Depth; in order that the Staling of them may not waſte in its Courſe; at the End of which you are to have a Ciſtern made of Clay; to receive all the Droppings of your Cattle. If you can ſhelter this Yard from the Rains, one Gallon of the Water from the Cattle, will be as ſerviceable as five Gallons of the other, where your Yard is not ſhelter'd;

The

The Water which comes from your Cattle, especially the Horses, is of very small Service to the Land; but when fermented together in the Cistern, it will gain much Spirit and Strength. The Dutch and Flandricans carry this Water in Waggons with a Sail-cloth, and when their Corn is sown, they sprinkle their Land with it: Especially their Rape, which they never transplant, without sprinkling of it with this Water, if they have it, which serves for one Year's Manuring. What I have said here, is but to give you a Hint; but when you come to try the Experiment, you may possibly know how to manage, better than I am able to tell you. Undoubtedly the Farmers will think the Charges of this Seed too great: But let them balance the profit that will proceed from it, with the Expence, and they'll certainly find, that it will redound very much to their Advantage. The first Profit will be their saving half the usual Quantity of Corn, and having of better Crops: Secondly, they will have Pasture for four times the Number of Sheep, and their Ground will be kept clean: Then, by feeding four Times the Number of Sheep, they will consequently have four Times the Quantity of Wool: By this means Meat will be cheaper, and you will be able to sell your Cloth at a lower Price in the foreign Markets. You will

then

then have no need either of Carrots, or Turnips; and your fallow Fields will be turned into profitable Paſtures. And, as your Graſs is always young, your Food for your Cattle will certainly be ſweeter: Conſequently your meat will be the richer, and Butter and Cheeſe abundantly the better. The Bird Graſs is a new Graſs to us; but, in my Opinion, it will prove the fineſt we have. It grows in quite a different Manner to any other Graſs: It is very ſhort jointed, and every Joint that touches the Ground, ſtrikes Root; and Branches ſhoot from every Joint that is above the Ground: When this Graſs is in a Condition for mowing, if you keep it for a Month it will ſtill remain green; neither doth it rot like other common Graſs. It grows to the Height of between two and three Feet, and admirably thick. If you can keep it clean, it will produce a great Crop the firſt Year; but the cleaning of it will be ſo chargeable, that I am afraid you will be obliged to ſow it among your Corn, in order to keep it clean. I have ſown, this laſt Michaelmas, an Acre of it, ſo that, by next Year, I may poſſibly be able to give you a better Deſcription. There is a Graſs, that I received from Mr. Small, under the Name of the Orchard Graſs, which ſeems to be very coarſe, but very ſweet, and of great Growth: It is a Graſs,

which

which I have heretofore ſeen in the Fields. We have already found out ſeveral Sorts of Graſs, to crop all Kinds of Land. The moſt dry, barren, ſandy Lands will bear the Burnet; It will be proper to plough the Land, which you propoſe for your Burnet, in the Spring, and ſow your Seed in the Month of Auguſt: Becauſe then the Nights grow long and colder; and as this Burnet grows all the Winter, it will take good Hold in the Ground. If you ſow it in the Spring, and the Weather ſhould prove dry, it may probably deſtroy it. In all your wet ſour Lands, you may ſow Timothy, which will make a ſtrong Bottom, and produce great Crops. As for what has been ſaid againſt the Timothy, you need not regard; becauſe they that have ſaid it, have talk'd without Experience: But all our Knowledge comes by Experience.

F I N I S.

which I have I shall here leave in the Fields. We have already found out several Sorts of Grass, to crop all Kinds of Land. The moist dry, barren, sandy Lands will bear the Manner: It will be proper to plough the Land, which you propose for your Harvest, in the Spring, and low your Seed in the Month of August: Because then the Nights grow long and cold; and as this Harvest grows all the Winter, it will take good Hold in the Ground. If you low it in the Spring, and the Weather should prove dry, it may probably destroy it. In all your wet low Lands, low Tit-mouse, which will make [illegible] Corn, and produce great Crops. [illegible] what has been said against the Tit-mouse, you need not fear; because they that have said it, have said without Experience: But all our Knowledge comes by Experience.